

CLAIMS

1. A handheld apparatus for cleaning and application of cleaning of a damaged coating on an article, the apparatus comprised of
  - an applicator communicably connected to a fluid dispensing unit by a dispensing tube, the fluid dispensing unit comprised of a liquid reservoir communicably connected to a dispensing tube.
2. The apparatus of claim 1, wherein the applicator is comprised of material selected from the group consisting of brushes, sponge material, cloth, and plastic pads.
3. The apparatus of claim 2, wherein the applicator is abrasive.
4. The apparatus of claim 2, wherein the applicator is non-abrasive and is disposed for application and smoothing of liquids.
5. The apparatus of claim 4, wherein the liquid reservoir is a squeeze bulb.
6. The apparatus of claim 5, wherein the liquid reservoir contains at least one cleaning solution.
7. The apparatus of claim 6, wherein the cleaning solution is selected from the group consisting of acetone and alcohol.
8. The apparatus of claim 2, further comprising valve means to prevent unintended dispensing of liquid.
9. The apparatus of claim 8, wherein the valve means is disposed in the liquid reservoir.
10. The apparatus of claim 8, wherein the valve means is disposed in the dispensing tube.
11. A handheld apparatus for application of primers and repair materials for in situ repair of a damaged coating on an article, the apparatus comprised of
  - a fluid dispensing unit comprised of a liquid reservoir communicably connected to one end of a dispensing tube, and at least one dispensing tip attached to the opposite end of the dispensing tube; and
  - at least one applicator attached to, but not communicably connected with, the fluid dispensing unit.

12. The apparatus of claim 11, wherein the liquid reservoir contains a liquid selected from the group consisting of primers and coating repair compositions.
13. The apparatus of claim 12, wherein the at least one dispensing tip is disposed so as to dispense liquid in close proximity to at least one applicator.
14. The apparatus of claim 12, wherein a plurality of dispensing tips are communicably connected to the dispensing tube.
15. A method of cleaning a coated surface of an article, the method comprised of the steps of providing a coated article, the article comprised of a component of a gas turbine engine assembly installed in the flowpath of a gas turbine engine, the article having a damaged coating area;  
providing an apparatus having an applicator communicably connected to a liquid dispensing unit by a dispensing tube, the liquid dispensing unit comprised of a liquid reservoir containing a cleaning solution, the liquid reservoir communicably connected to the applicator by a dispensing tube;  
cleaning the damaged area of the coating with the apparatus by moving the applicator across the damaged area;  
dispensing a liquid from the apparatus by applying external pressure to the liquid reservoir; and  
distributing the liquid using the applicator.
16. The method of claim 15, further comprised of the steps of providing a second apparatus comprised of a liquid dispensing unit comprised of a liquid reservoir containing a liquid, the liquid reservoir communicably connected to one end of a dispensing tube, and a dispensing tip communicably connected to the opposite end of the dispensing tube, the apparatus further comprised of at least one applicator attached to, but not communicably connected with, the fluid dispensing unit; and  
dispensing a liquid from the dispensing tip of the second apparatus by applying external pressure to the liquid reservoir; and  
distributing the liquid using the applicator of the second apparatus.

17. The method of claim 16, wherein the liquid contained in the liquid reservoir of the second apparatus is selected from the group consisting of primers and coating repair compositions.
18. The method of claim 17, wherein the coating repair composition is a liquid mixture comprising one or more refractory materials in powdered form, one or more binders, and a solvent.
19. The method of claim 18, wherein the refractory materials are selected from the group consisting of oxides of alumina, zirconia, hafnia, magnesia, titanium, calcium, silica, yttria, and combinations thereof.
20. The method of claim 16, further comprised of the steps of
  - providing a third apparatus comprised of a liquid dispensing unit comprised of a liquid reservoir containing a liquid, the liquid reservoir communicably connected to one end of a dispensing tube, and a dispensing tip communicably connected to the opposite end of the dispensing tube, the apparatus further comprised of at least one applicator attached to, but not communicably connected with, the fluid dispensing unit; and
  - dispensing a liquid from the dispensing tip of the second apparatus by applying external pressure to the liquid reservoir; and
  - distributing the liquid using the applicator of the second apparatus.
21. The method of claim 20, wherein the liquid contained in the liquid reservoir of the second apparatus is a primer, and wherein the liquid contained in the reservoir of the third apparatus is a coating repair composition comprised of a liquid mixture comprising one or more refractory materials, one or more binders, and a solvent.